Aquaculture

VOLS. 410–411 CONTENTS 10 OCTOBER 2013

(Abstracts/contents list published in: Aquatic Science and Fisheries Abstracts, Biological Abstracts, Elsevier BIOBASE/Current Awareness in Biological Sciences, Current Contents A, B & ES, EMBiology, Environment Abstracts, Freshwater and Aquaculture Contents Tables, Geo Abstracts, Geobase, Marine Science Contents Tables, Zoological Record). Also covered in the abstract and citation database Scopus®. Full text available in ScienceDirect®

Diseases

Comparison of disease resistance between diploid, induced-triploid, and intercross-triploid rainbow trout including trout selected for resistance to *Flavobacterium psychrophilum*
G.M. Weber, G.D. Wiens, T.J. Welch, M.A. Hostuttler and T.D. Leeds (Kearneysville, WV, USA) 66

Phylogenetic investigation of *Edwardsiella tarda* with multilocus sequence typing (MLST) and pulsed field gel electrophoresis (PFGE) typing methods
M. Yang, S. Shao, J. Xiao, Q. Wang and Y. Zhang (Shanghai, PR China) 79

Prevalence and infection intensity of sea lice (*Lepeophtheirus salmonis*) on Atlantic salmon (*Salmo salar*) host is reduced by the non-host compound 2-aminoacetophenone
L.C. Hastie (UK), C. Wallace (Norway), M.A. Birkett, A. Douglas, O. Jones, A.J. Mordue (Luntz) (UK), G. Ritchie (Norway), J.A. Pickett, J.L. Webster and A.S. Bowman (UK) 179

Use of restriction enzyme fragment length polymorphism (RFLP) of the 16S–23S rRNA internal transcribed spacer region (ITS) for identification of fish mycobacteria
F. Pourahmad (Ilam, Iran) and R.H. Richards (Stirling, UK) 184

Development of a highly sensitive single-tube nested PCR protocol directed toward the sequence of virion envelope proteins for detection of white spot syndrome virus infection: Improvement of PCR methods for detection of WSSV
J.Y. Park, K.I. Kim, S.J. Joh, J.Y. Kang, J.H. Kwon, H.S. Lee and Y.K. Kwon (Anyang, Republic of Korea) 225

Genetics

Mismatch between molecular (mtDNA) and morphological classification of *Macrobrachium* prawns from Southern Nigeria: Cryptic freshwater species and brackish water morphotypes
A.A. Jimoh (Hull, United Kingdom; Ojo, Nigeria), M.A. Anetekhai (Ojo, Nigeria), S. Cummings (Hull, United Kingdom), O.T.F. Abanikanda (Ojo, Nigeria), G.F. Turner, C. van Oosterhout and B. Hänfling (Hull, United Kingdom) 25

Ploidy and family effects on Atlantic salmon (*Salmo salar*) growth, deformity and harvest quality during a full commercial production cycle
J.F. Taylor, F. Sambraus, J. Mota-Velasco, D.R. Guy, A. Hamilton, D. Hunter, D. Corrigan and H. Migaud (Scotland, UK) 41

Quantitative trait loci for precocious parr maturation, early smoltification, and adult maturation in double-backcrossed trans-Atlantic salmon (*Salmo salar*)
S. Pedersen (Guelph, Ontario, Canada), P.R. Berg (Ås, Norway), M. Culling, R.G. Danzmann (Guelph, Ontario, Canada), B. Glebe, S. Leadbeater (New Brunswick, Canada), S. Lien, T. Moen (Ås, Norway), W. Vandersteen (Vancouver, British Columbia, Canada) and E.G. Boulding (Guelph, Ontario, Canada) 164

Genotype by environment interaction for growth of sole (*Solea solea*) reared in an intensive aquaculture system and in a semi-natural environment
J. Mas-Muñoz (Wageningen, Yerseke, The Netherlands), R. Blonk (Yerseke, The Netherlands), J.W. Schrama, J. van Arendonk and H. Komen (Wageningen, The Netherlands) 230

(continued on last page of this issue)

Visit the Elsevier Aquaculture Website today!

New FREE Online Features:

- **Table of Contents NOW WITH ABSTRACTS**
- **Full Search on Abstracts, Authors and Keywords**
- **Author and Subject Index**

Bookmark: http://www.elsevier.com/locate/aqua-online or http://www.elsevier.com/locate/aqua-online

0044-8486(20131010)410/411C;1-U

Available online at www.sciencedirect.com

ScienceDirect

(contents continued from back cover)

Genetic parameters of in-vivo prediction of carcass, head and fillet yields by internal ultrasound and 2D external imagery in large rainbow trout (*Oncorhynchus mykiss*)
P. Haffray, J. Bugeon, Q. Rivard, B. Quittet, S. Puyo (Rennes, France), J.M. Allamelou (Jouy-en-Josas, France), M. Vandeputte (Jouy-en-Josas, Palavas-les-Flots, France) and M. Dupont-Nivet (Jouy-en-Josas, France) 236

Nutrition

The use of a soy product in juvenile yellowtail kingfish (*Seriola lalandi*) feeds at different water temperatures: 2. Soy protein concentrate
J.N. Bowyer, J.G. Qin (Adelaide, South Australia, Australia), R.P. Smullen (Deception Bay, Queensland, Australia), L.R. Adams (Launceston, Tasmania, Australia), M.J.S. Thomson (Port Lincoln, South Australia, Australia) and D.A.J. Stone (Adelaide, West Beach, South Australia, Australia) 1

Molecular cloning, expression and activity of pyruvate kinase in grass carp *Ctenopharyngodon idella*: Effects of dietary carbohydrate level
X. Yuan, Y. Zhou, X.-F. Liang, J. Li, L. Liu, B. Li, Y. He, X. Guo and L. Fang (Hubei, China) 32

Effects of dietary phospholipids on survival, growth, digestive enzymes and stress resistance of large yellow croaker, *Larmichthys crocea* larvae
J. Zhao, Q. Ai, K. Mai, R. Zuo and Y. Luo (Qingdao, PR China) 122

Bioenergetics-Based Factorial Model to Determine Feed Requirement and Waste Output of Tilapia Produced under Commercial Conditions
M.A.K. Chowdhury (Guelph, Ontario, Canada), S. Siddiqui (Dorion, Ontario, Canada), K. Hua (Berlin, Germany) and D.P. Bureau (Guelph, Ontario, Canada) 138

Evaluation of the potential of Andean lupin meal (*Lupinus mutabilis* Sweet) as an alternative to fish meal in juvenile *Litopenaeus vannamei* diets
C. Molina-Poveda, M. Lucas (Guayaquil, Ecuador) and M. Jover (Valencia, Spain) 148

Effect of C/N ratio levels and stocking density of *Labeo victorianus* on pond environmental quality using maize flour as a carbon source
E.W. Magondu (Wageningen, The Netherlands; Mombasa, Kenya), H. Charo-Karisa (Sagana, Kenya) and M.C.J. Verdegem (Wageningen, The Netherlands) 157

Effects of different light/dark regimes and algal food on growth, fecundity, ephippial induction and molting of freshwater cladoceran, *Ceriodaphnia quadrangula*
D. Taghavi, O. Farhadian, N.M. Soofi ani and Y. Keivany (Isfahan, Iran) 190

Assessment of the feasibility of including high levels of rapeseed meal and peanut meal in diets of juvenile crucian carp (*Carassius auratus gibelio*♀×*Cyprinus carpio*♂): Growth, immunity, intestinal morphology, and microflora
C. Cai, L. Song, Y. Wang, P. Wu, Y. Ye, Z. Zhang and C. Yang (Suzhou, PR China) 203

Physiology and Endocrinology: Fish

Differential gut growth, gene expression and digestive enzyme activities in young grass carp (*Ctenopharyngodon idella*) fed with plant and animal diets
S. He, X.-F. Liang, L. Li, J. Sun and D. Shen (Wuhan, PR China) 18

Spawning of tiger grouper *Epinephelus fuscoguttatus* and squaretail coralgrouper *Plectropomus areolatus* in sea cages and onshore tanks in Andaman and Nicobar Islands, India
M.A. Rimmer (South Sulawesi, Indonesia), Y.C. Thampisamraj, P. Jayagopal (Sirkali Taluk, India), D. Thineshsanthar, P.N. Damodar (Andaman and Nicobar Islands, India) and J.D. Toledo (Iloilo, Philippines) 197

Physiology and Endocrinology: Molluscs and Crustaceans

Effect of copper on the immunomodulatory activities of haemocytes in juveniles of the abalone *Haliotis rufescens* cultivated under hatchery conditions
F. Silva-Aciares (Antofagasta, Chile; Plouzané, France), D. Moraga (Plouzané, France) and C. Riquelme (Antofagasta, Chile) 72

Constraints on seedstock production in eighth generation domesticated *Penaeus monodon* broodstock
S.J. Arnold, G.J. Coman (Brisbane, QLD, Australia) and M. Emerenciano (Santa Catarina, Brazil) 95

Improved primary cell culture and subculture of lymphoid organs of the greasyback shrimp *Metapenaeus ensis*
Q. Han, P. Li (Qingdao, China), X. Lu (Houston, TX, USA), Z. Guo and H. Guo (Qingdao, China) 101

Recovery periods of cultured spiny lobster, *Sagmariasus verreauxi* juveniles: Effects of handling, force feeding, exercising to exhaustion and anaesthesia on oxygen consumption and ammonia-N excretion rates
M.A. Jensen, Q.P. Fitzgibbon, C.G. Carter (Hobart, Tasmania, Australia) and L.R. Adams (Launceston, Tasmania, Australia) 114

Cloning and tissue expression of hemocyanin gene in *Cherax quadricarinatus* during white spot syndrome virus infection
D.-L. Wang (Ningbo, Shanghai, China), T. Sun, D. Zuo, L.-M. Wang, Q. Wang and Y.-L. Zhao (Shanghai, China) 216

Production Science

The effect of spawning of cultured mussels (*Mytilus edulis*) on mechanical properties, chemical and biochemical composition of byssal threads
R. Hennebicq (Rimouski, Québec, Canada), G. Fabra, C. Pellerin, I. Marcotte (Montréal, Québec, Canada), B. Myrand (Cap-aux-Meules, Québec, Canada) and R. Tremblay (Rimouski, Québec, Canada) 11

(contents continued)

Stocking density of Nile tilapia in cages placed in a hydroelectric reservoir
F. Garcia, D.M. Romera, K.S. Gozi (Votuporanga, Brazil), E.M. Onaka, F.S. Fonseca (São José do Rio Preto, Brazil), S.H.C. Schalch (Votuporanga, Brazil), P.G. Candeira (São José do Rio Preto, Brazil), L.O.M. Guerra (Jaboticabal, Brazil), F.J. Carmo (Santa Fé do Sul, Brazil), D.J. Carneiro, M.I.E.G. Martins and M.C. Portella (Jaboticabal, Brazil) 51

Suspended versus bottom oyster culture in eastern Canada: Comparing stocking densities and clearance rates
L.A. Comeau (Moncton, New Brunswick, Canada) 57

A new method for cultivation of the carragenophyte and edible red seaweed *Chondracanthus chamissoi* based on secondary attachment disc: Development in outdoor tanks
C. Bulboa (Santiago, Chile), K. Véliz, F. Sáez, C. Sepúlveda, L. Vega and J. Macchiavello (Coquimbo, Chile) 86

Regeneration as a novel method to culture marine ornamental sabellids
J.M. Murray (Suffolk, Portsmouth, UK), G.J. Watson (Portsmouth, UK), A. Giangrande, M. Licciano (Lecce, Italy) and M.G. Bentley (Newcastle upon Tyne, UK) 129

Sustainability and Society

Ecological–economic assessment of monoculture and integrated multi-trophic aquaculture in Sanggou Bay of China
H. Shi, W. Zheng, X. Zhang, M. Zhu and D. Ding (Qingdao, China) 172